Ibrahim T Ozbolat

List of Publications by Year
in descending order

96 papers	9,621 citations	57719 44 h-index	54882 84 g-index
105 all docs	105 docs citations	105 times ranked	7585 citing authors

#	Article	IF	Citations
1	Current advances and future perspectives in extrusion-based bioprinting. Biomaterials, 2016, 76, 321-343.	5.7	1,154
2	The bioink: A comprehensive review on bioprintable materials. Biotechnology Advances, 2017, 35, 217-239.	6.0	770
3	A comprehensive review on droplet-based bioprinting: Past, present and future. Biomaterials, 2016, 102, 20-42.	5.7	616
4	Bioprinting Toward Organ Fabrication: Challenges and Future Trends. IEEE Transactions on Biomedical Engineering, 2013, 60, 691-699.	2.5	545
5	Bioprinting for vascular and vascularized tissue biofabrication. Acta Biomaterialia, 2017, 51, 1-20.	4.1	327
6	Bioprinting Technology: A Current State-of-the-Art Review. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2014, 136, .	1.3	323
7	The bioprinting roadmap. Biofabrication, 2020, 12, 022002.	3.7	291
8	Bioprinting scale-up tissue and organ constructs for transplantation. Trends in Biotechnology, 2015, 33, 395-400.	4.9	277
9	Application areas of 3D bioprinting. Drug Discovery Today, 2016, 21, 1257-1271.	3.2	258
10	3D bioprinting for drug discovery and development in pharmaceutics. Acta Biomaterialia, 2017, 57, 26-46.	4.1	229
11	Evaluation of Cell Viability and Functionality in Vessel-like Bioprintable Cell-Laden Tubular Channels. Journal of Biomechanical Engineering, 2013, 135, 91011.	0.6	218
12	Three-dimensional bioprinting using self-assembling scalable scaffold-free â€œtissue strandsâ€•as a new bioink. Scientific Reports, 2016, 6, 28714.	1.6	204
13	Characterization of printable cellular micro-fluidic channels for tissue engineering. Biofabrication, 2013, 5, 025004.	3.7	195
14	Bioprinting towards Physiologically Relevant Tissue Models for Pharmaceutics. Trends in Biotechnology, 2016, 34, 722-732.	4.9	186
15	In vitro study of directly bioprinted perfusable vasculature conduits. Biomaterials Science, 2015, 3, 134-143.	2.6	183
16	Aspiration-assisted bioprinting for precise positioning of biologics. Science Advances, 2020, 6, eaaw5111.	4.7	170
17	3D bioprinting for reconstituting the cancer microenvironment. Npj Precision Oncology, 2020, 4, 18.	2.3	163
18	Inkjet Printing of Selfâ€Assembled 2D Titanium Carbide and Protein Electrodes for Stimuliâ€Responsive Electromagnetic Shielding. Advanced Functional Materials, 2018, 28, 1801972.	7.8	157

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19	Development of â€˜Multi-arm Bioprinterâ€™ for hybrid biofabrication of tissue engineering constructs. Robotics and Computer-Integrated Manufacturing, 2014, 30, 295-304.	6.1	148
20	3D bioprinting of cells, tissues and organs. Scientific Reports, 2020, 10, 14023.	1.6	148
21	Direct Bioprinting of Vessel-Like Tubular Microfluidic Channels. Journal of Nanotechnology in Engineering and Medicine, 2013, 4, .	0.8	142
22	Evaluation of bioprinter technologies. Additive Manufacturing, 2017, 13, 179-200.	1.7	141
23	Concise Review: Bioprinting of Stem Cells for Transplantable Tissue Fabrication. Stem Cells Translational Medicine, 2017, 6, 1940-1948.	1.6	132
24	<i>In vitro</i>evaluation of carbon-nanotube-reinforced bioprintable vascular conduits. Nanotechnology, 2014, 25, 145101.	1.3	126
25	Scaffold-Based or Scaffold-Free Bioprinting: Competing or Complementing Approaches?. Journal of Nanotechnology in Engineering and Medicine, 2015, 6, .	0.8	125
26	3D Printing of PDMS Improves Its Mechanical and Cell Adhesion Properties. ACS Biomaterials Science and Engineering, 2018, 4, 682-693.	2.6	119
27	Synergistic interplay between human MSCs and HUVECs in 3D spheroids laden in collagen/fibrin hydrogels for bone tissue engineering. Acta Biomaterialia, 2019, 95, 348-356.	4.1	117
28	Bioprinting functional tissues. Acta Biomaterialia, 2019, 95, 32-49.	4.1	114
29	Essential steps in bioprinting: From pre- to post-bioprinting. Biotechnology Advances, 2018, 36, 1481-1504.	6.0	105
30	Microfabrication of scaffold-free tissue strands for three-dimensional tissue engineering. Biofabrication, 2015, 7, 031002.	3.7	89
31	Thermally-controlled extrusion-based bioprinting of collagen. Journal of Materials Science: Materials in Medicine, 2019, 30, 55.	1.7	86
32	Transplantation of Bioprinted Tissues and Organs. Annals of Surgery, 2017, 266, 48-58.	2.1	83
33	Three-dimensional Bioprinting for Bone and Cartilage Restoration in Orthopaedic Surgery. Journal of the American Academy of Orthopaedic Surgeons, The, 2019, 27, e215-e226.	1.1	78
34	Engineered Tissue Scaffolds With Variational Porous Architecture. Journal of Biomechanical Engineering, 2011, 133, 011001.	0.6	73
35	A Hybrid Bioprinting Approach for Scale-Up Tissue Fabrication. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2014, 136, .	1.3	72
36	3D Bioprinting of Carbohydrazide-Modified Gelatin into Microparticle-Suspended Oxidized Alginate for the Fabrication of Complex-Shaped Tissue Constructs. ACS Applied Materials & Interfaces, 2020, 12, 20295-20306.	4.0	65

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37	3D Bioprinting of Tumor Models for Cancer Research. ACS Applied Bio Materials, 2020, 3, 5552-5573.	2.3	63
38	Aspiration-assisted freeform bioprinting of pre-fabricated tissue spheroids in a yield-stress gel. Communications Physics, 2020, 3, .	2.0	62
39	Intraoperative Bioprinting: Repairing Tissues and Organs in a Surgical Setting. Trends in Biotechnology, 2020, 38, 594-605.	4.9	62
40	Natural and Synthetic Bioinks for 3D Bioprinting. Advanced NanoBiomed Research, 2021, 1, 2000097.	1.7	60
41	3D printing of poly(Îµ-caprolactone)/poly(D,L-lactide-<i>co</i>-glycolide)/hydroxyapatite composite constructs for bone tissue engineering. Journal of Materials Research, 2018, 33, 1972-1986.	1.2	51
42	A review on design for bioprinting. Bioprinting, 2016, 3-4, 1-14.	2.9	50
43	3D bioprinting for modelling vasculature. Microphysiological Systems, 2018, 1, 1-1.	2.0	48
44	Controlled and Sequential Delivery of Fluorophores from 3D Printed Alginate-PLGA Tubes. Annals of Biomedical Engineering, 2017, 45, 297-305.	1.3	46
45	Three-Dimensional Bioprinting of Articular Cartilage: A Systematic Review. Cartilage, 2021, 12, 76-92.	1.4	46
46	Bioprinting and Cellular Therapies for Type 1 Diabetes. Trends in Biotechnology, 2017, 35, 1025-1034.	4.9	45
47	Collagen-infilled 3D printed scaffolds loaded with miR-148b-transfected bone marrow stem cells improve calvarial bone regeneration in rats. Materials Science and Engineering C, 2019, 105, 110128.	3.8	45
48	Aspiration-assisted bioprinting of the osteochondral interface. Scientific Reports, 2020, 10, 13148.	1.6	45
49	Bone tissue bioprinting for craniofacial reconstruction. Biotechnology and Bioengineering, 2017, 114, 2424-2431.	1.7	40
50	Intraâ€Operative Bioprinting of Hard, Soft, and Hard/Soft Composite Tissues for Craniomaxillofacial Reconstruction. Advanced Functional Materials, 2021, 31, 2010858.	7.8	37
51	Developments with 3D bioprinting for novel drug discovery. Expert Opinion on Drug Discovery, 2018, 13, 1115-1129.	2.5	35
52	Aspiration-assisted bioprinting of co-cultured osteogenic spheroids for bone tissue engineering. Biofabrication, 2021, 13, 015013.	3.7	34
53	Controlled Co-delivery of pPDGF-B and pBMP-2 from intraoperatively bioprinted bone constructs improves the repair of calvarial defects in rats. Biomaterials, 2022, 281, 121333.	5.7	31
54	Extrusion-based printing of sacrificial Carbopol ink for fabrication of microfluidic devices. Biofabrication, 2019, 11, 034101.	3.7	30

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55	Challenges in Bio-fabrication of Organoid Cultures. Advances in Experimental Medicine and Biology, 2018, 1107, 53-71.	0.8	29
56	Hybrid Bioprinting of Zonally Stratified Human Articular Cartilage Using Scaffoldâ€Free Tissue Strands as Building Blocks. Advanced Healthcare Materials, 2020, 9, e2001657.	3.9	29
57	Studying Tumor Angiogenesis and Cancer Invasion in a Threeâ€Dimensional Vascularized Breast Cancer Microâ€Environment. Advanced Biology, 2021, 5, e2100090.	1.4	27
58	Recent advances in bioprinting technologies for engineering hepatic tissue. Materials Science and Engineering C, 2021, 123, 112013.	3.8	26
59	Bioprinting of osteochondral tissues: A perspective on current gaps and future trends. International Journal of Bioprinting, 2017, 3, 007.	1.7	25
60	Aspiration-assisted freeform bioprinting of mesenchymal stem cell spheroids within alginate microgels. Biofabrication, 2022, 14, 024103.	3.7	25
61	Sprouting angiogenesis in engineered pseudo islets. Biofabrication, 2018, 10, 035003.	3.7	24
62	Modeling of Spatially Controlled Biomolecules in Three-Dimensional Porous Alginate Structures. Journal of Medical Devices, Transactions of the ASME, 2010, 4, .	0.4	23
63	Effect of multiwall carbon nanotube reinforcement on coaxially extruded cellular vascular conduits. Materials Science and Engineering C, 2014, 39, 126-133.	3.8	22
64	Porous tissue strands: avascular building blocks for scalable tissue fabrication. Biofabrication, 2019, 11, 015009.	3.7	22
65	Surface Micropatterning of Pure Titanium for Biomedical Applications Via High Energy Pulse Laser Peening. Journal of Micro and Nano-Manufacturing, 2015, 3, .	0.8	21
66	Rheological investigation of collagen, fibrinogen, and thrombin solutions for drop-on-demand 3D bioprinting. Soft Matter, 2020, 16, 10506-10517.	1.2	21
67	Materials and scaffolds in medical 3D printing and bioprinting in the context of bone regeneration. International Journal of Computerized Dentistry, 2016, 19, 301-321.	0.2	21
68	Multi-function Based Modeling of 3D Heterogeneous Wound Scaffolds for Improved Wound Healing. Computer-Aided Design and Applications, 2011, 8, 43-57.	0.4	20
69	Design of a New Parametric Path Plan for Additive Manufacturing of Hollow Porous Structures With Functionally Graded Materials. Journal of Computing and Information Science in Engineering, 2014, 14, .	1.7	19
70	Dual-charge bacterial cellulose as a potential 3D printable material for soft tissue engineering. Composites Part B: Engineering, 2022, 231, 109598.	5.9	19
71	Fabrication of PDMS microfluidic devices using nanoclay-reinforced Pluronic F-127 as a sacrificial ink. Biomedical Materials (Bristol), 2021, 16, 045005.	1.7	18
72	Extrusion-Based Biofabrication in Tissue Engineering and Regenerative Medicine. , 2018, , 255-281.		15

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73	The Role of Concentration on Drop Formation and Breakup of Collagen, Fibrinogen, and Thrombin Solutions during Inkjet Bioprinting. Langmuir, 2020, 36, 15373-15385.	1.6	15
74	Cellular Based Strategies for Microvascular Engineering. Stem Cell Reviews and Reports, 2019, 15, 218-240.	5.6	14
75	Hybrid tissue scaffolds for controlled release applications. Virtual and Physical Prototyping, 2012, 7, 37-47.	5.3	13
76	3D hybrid wound devices for spatiotemporally controlled release kinetics. Computer Methods and Programs in Biomedicine, 2012, 108, 922-931.	2.6	12
77	3D Bioprinting for fabrication of tissue models of COVID-19 infection. Essays in Biochemistry, 2021, 65, 503-518.	2.1	11
78	3D coaxial bioprinting: process mechanisms, bioinks and applications. Progress in Biomedical Engineering, 2022, 4, 022003.	2.8	11
79	miRNA induced co-differentiation and cross-talk of adipose tissue-derived progenitor cells for 3D heterotypic pre-vascularized bone formation. Biofabrication, 2021, 13, 044107.	3.7	10
80	Squid Ring Teethâ€“coated Mesh Improves Abdominal Wall Repair. Plastic and Reconstructive Surgery - Global Open, 2018, 6, e1881.	0.3	8
81	3D Coaxial Bioprinting of Vasculature. Methods in Molecular Biology, 2020, 2140, 171-181.	0.4	8
82	miRNA induced 3D bioprinted-heterotypic osteochondral interface. Biofabrication, 2022, 14, 044104.	3.7	8
83	Extrusion-Based Biofabrication in Tissue Engineering and Regenerative Medicine. , 2016, , 1-27.		7
84	3D Printing for Cell Therapy Applications. Molecular and Translational Medicine, 2017, , 227-248.	0.4	6
85	The Bioink âˆ— âˆ—With contributions by Monika Hospodiuk and Madhuri Dey, The Pennsylvania State University.. , 2017, , 41-92.		3
86	Bioprinter Technologies âˆ— âˆ—With contributions by Hemanth Gudupati and Kazim Moncal, The Pennsylvania State University.. , 2017, , 199-241.		3
87	Development of a Multi-Arm Bioprinter for Hybrid Tissue Engineering. , 2013, , .		2
88	Laser-Based Bioprinting âˆ— âˆ—With minor contributions by Hemanth Gudapati, The Pennsylvania State University.. , 2017, , 165-197.		2
89	Roadmap to Organ Printing. , 2017, , 243-269.		2
90	Navigating the Genomic Landscape of Human Adipose Stem Cell-Derived Î²-Cells. Stem Cells and Development, 2021, 30, 1153-1170.	1.1	2

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91	Bioprinting Induced Cell Damage in Cellular Micro-Fluidic Channel Fabrication. , 2013, , .		1
92	Droplet-Based Bioprinting âˆ— âˆ—With contributions by Hemanth Gudupati and Madhuri Dey, The Pennsylvania State University.. , 2017, , 125-163.		1
93	Applications of 3D Bioprinting âˆ— âˆ—With minor contributions by Dr. Weijie Peng, The Pennsylvania State University.. , 2017, , 271-312.		1
94	Tissue Engineering: Intraâ€Operative Bioprinting of Hard, Soft, and Hard/Soft Composite Tissues for Craniomaxillofacial Reconstruction (Adv. Funct. Mater. 29/2021). Advanced Functional Materials, 2021, 31, 2170212.	7.8	1
95	Design for Bioprinting. , 2017, , 13-39.		0
96	A Scaffold Free 3D Bioprinted Cartilage Model for In Vitro Toxicology. Methods in Molecular Biology, 2021, 2147, 175-183.	0.4	0